•	abel No. EV667329262US	11.0	And and Tre	demont Office U.S. DFI	(08-04) 11/30/2003, OMB 0651-0035 PARTMENT OF COMMERCE
Under the Peperwar	k Reduction Act of 1995, no persons are re-	quired to reapond to a tol	ection of Infor	roution shape ? dispisy	a valid OMB politrol number.
		whitestien stout	<b>**</b> **	To be essione	
POWER OF ATTORNEY		Filing Date		June 10.	
, 0	First Named Inve	ntor	Wayne D. Fran		
connect	Title		Polarization-sr	thenced detector	
•	ONDENCE ADDRESS	Art Unit		To be assigne	d
INDA	CATION FORM	Exeminer Neme		To be assigne	d
		Attorney Docket	Number	112624,00089	
I hereby appoint:			<del></del>		
Practitioners as: Number:	sociated with the Customer	26707			
OR [					
Prectitioner(s) n				The Contract of Street	
	Ngme .			Registration Number	
			***************************************		140.0-144 THE RESIDENCE AND RESIDENCE
as my/our attorney(s) Trademark Office con	or agant(s) to prosecute the application rected therewith.	n identified above, and	to transact	all business in the Ur	nited States Patent and
	hange the correspondence address for associated with the above-mentioned		pplication to	<b>:</b>	
	s essociated with Oustomer Number:				
Firm or					
Address				<del></del>	
					71.
City		Sta	10		Z4p
Country					
Telephona		Fao			<del></del>
am the:  Applicant/inv	rentor.				
Assignee of Statement up	record of the entire interest. See 37 CF nder 37 CFR 3.73(b) is enclosed. (For	FR 3.71. m <i>PTO/\$8/98</i> J			
		of Applicant or Assig	nee of Reco	ord	
Signature	(Kens) Henry	4/		Deta	6/9/05
Name	Lars Chapsky			Telephone	480.308.062
Title and Company					
NOTE: Signatures of sil- signature is required, as	the inventors or essignees of record of the e	ontire interest or their repri	sentative(s)	ere required. Submit mu	ttiple forms if more than one
[2]	2				

Toma are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to proceed) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This controller is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this turns on the amount of time you require to complete this turns endur suggestions for neckching this burden, about the sent to the Chief information Office.

U.S. Peterst and Tredemark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

(09-04)
Approved for use through 11/30/2005. ONB 0551-035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE to a collection of information unless it displays a valid OMS control in a collection of information unless it displays a valid OMS control in a collection of information unless it displays a valid OMS control in a collection of information unless it displays a valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid OMS control in a collection of information unless it displays as valid on the collection of information unless it displays as valid on the collection of information unless it displays as valid on the collection of information unless it displays as valid on the collection of the colle

Linder the Peperwork Reduction Act of 1995, no persons are requir

## **POWER OF ATTORNEY** and **CORRESPONDENCE ADDRESS INDICATION FORM**

AN THE LEAST OF THE CONTRACT OF REAL	menon miness it disbiglis a Asial Civits counci unitidal.
Application Number	To be assigned
Filing Date	June 10, 2005
First Named Inventor	Wayne D. Frasch
Title	Polarization-enhanced detector
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	112824 00080

I heroby appoint								
Practitioners associated with the Customer Number:	26707							
ĊR								
Practitioner(s) named below:								
Name	Registration Number							
as my/our attorney(s) or agent(s) to prosecute the application Trademark Office connected therewith.	n Identified abovo, and to transact all business in the United States Patent and							
	Alexander Alexander Anna Alexander Anna Alexander Anna Alexander Anna Alexander Anna Anna Anna Anna Anna Anna Anna Ann							
Please recognize or change the correspondence address for The address associated with the above-mentioned 0								
	Custories number:							
OR	OR							
The address associated with Customer Number:								
Firm or Individual Name								
Address								
City	State Zip							
Country								
Talaphona	Fax							
l am tho:  Applicant/inventor.								
Assignee of record of the entire interest. Soe 37 CFR Statement under 37 CFR 3.73(b) is enclosed. (Form	R 3.71. o PTO/SIB96)							
	Applicant or Assignee of Record							
Signature (1) augus 1 Than	Dette (0-8-05							
Name Wayne D. Frasch	Telephone 480-759-7001							
Title and Company Prefessor, Arteonas	State University							
NOTE: Signatures of all the inventors or assignees of record of the enti- signature is required, see below.	fire interest or their representative(s) are required. Submit multiple forms if more than one							
Total of 2 forms are submitted.								

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to the (and by the USPTO to process) an application. Confiderdality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 infrarias to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the handstart case. Any comments on the amount of time you require to complete this form entitle suggestions for reducing this burdon, should be sent to the Chief Information Officer, U.S. Patent and Tradomark Office, U.S. Department of Comments, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

(08-04)
Approved for use through 07/31/2006, CMB 0651-0052
U.S. Peternt and Trademark Office; U.S. DEPARTMENT OF COMMERCE to a cylindron of information unions is complete a valid DMB control impact to the complete of the control impact to the control of the con

Under the Paperwork Reduction A	ot of 1995, no penso	ne are required to respe	A CONTROL OF THE CONT					
DECLADATION	FOR LITH IT		Attorney Docket Number	1126:2	4.00D89			
DECLARATION FOR UTILITY OR DESIGN			First Named Inventor	late A. v.	Vayne D. Frasch			
PATENT APPLICATION			COMPLETE IF KNOWN					
(37 CFR 1.63)			Application Number	To be	assigned			
Declaration	Declaret		Filing Date	Jun	e 10, 20	05		
Submitted OR With Initial	Filing (s	n entringer	Art Unit		assigned	<u> </u>		
Filing	(37 CFR	1.16 (e)) )	Examiner Name	To be	assigned			
I hereby declare that:								
Each inventor's residence, ma	lling address, a	nd ultizenship are a	txen woled betate a	to their nans	9.			
I believe the inventor(s) name	d below to be th	e original and first	inventor(s) of the sub	ject matter v	which is claims	d and for		
which a patent is sought on the	e invention enti	ded:						
POLARIZATION-ENI	HANCEDD	ETECTOR WI	TH GOLD NAN	ORODS	FOR DETE	CTING		
			ON AND METH			.5,1110		
,				· · · · · ·				
		(Title of the	Invention)					
the specification of which								
is attached hereto								
OR			_					
was filed on (MM/DD/Y	m [	12/11/03	as United States	Application	Number or PC	International		
<u></u>			<b>J</b>					
	1803/39435		d on (MM/DD/YYY)	<u> </u>		(If applicable).		
I hereby state that I have revisemended by any amendment			of the above identifie	ed specificat	lon, including t	he claims, as		
	. ,				- 27 CF3 4 5	0 :		
I acknowledge the duty to di continuation-in-part applicatio	ns, material infi	ormation which be	came available between	een the fillry	g date of the p	e, including for inor application		
and the national or PCT Intern	ational filing de	te of the continuati	on-in-part application					
I hereby claim foreign priority inventor's or plant breeder's r	ights certificate	(s), or 385(a) of ar	ry PCT international	application (	which designs	led at least one		
country other than the United	States of Amer	ica, listed below as	nd have also identifie	d below, by	checking the t	xx, any foreign		
application for patent, invento before that of the application of			Bio(5), or any PCT in		appiication nev	und a unud auto		
Prior Foreign Application	I	Foreign Filin		ionty		opy Attached?		
Number(a)	Country	(MM/DD/YY	NOT C	Claimed	YES	NO V		
F G I I LI GUGGERGO	l'~'	1211200	1	H				
	I					片		
	1			닏				
				<u> </u>		<u></u>		
Additional foreign ap	plication numb		supplemental priority	data sheet F	TO/SB/02B a	tached hereto.		
		[Page	1 of 2]					

This collection of information is required by 35 U.S.C. 115 and 37 GFR 1.63. The information is required to obtain or retain a benefit by the public varion is to file (and by the USPTO to process) an application. Confidentially is governed by 35 U.S.C. 122 and 37 GFR 1.11 and 1.14. This collection is estimated to bake 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the hidh/dual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this ourden, should be sent to the Chief Information Officer, U.S. Petert and Trademark Officer, U.S. Department of Commerce, P.O. Box 1450, Assemblia, VA 22313-1450, DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Potente, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance completing the form. cell 1-800-PTO-9199 and select option 2. 1934800

## (98-04) Approved for use through 07/31/2008, CMB 0651-0032 U.S., Patent and Trademerk Office; U.S. DEPARTMENT OF COMMERCE. Under the Papengod; Reduction Act of 1985, no persons are required to respond to a consistent of information unless it contains a valid OMB control remoter. **DECLARATION** — Utility or Design Patent Application

correspondence to:	address octated with stomer Number.		26707				OR		Correspondence address below
Name									
Address									
City				State					ZIP
Country		Telephor	10				Fax		
and belief are believed to be statements and the like so mad	I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and baker are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.								
NAME OF SOLE OR FIRST IN	VENTOR:		□ Ap	etiti <u>on</u>	has i				ned inventor
Given Name (first and middle [i	fanyj)				Family Name or Surname				
Wayne D.			0			Frasch			
Inventor's Signature									Date
Residence: City	State			Coun	•			1	nehip
Phoenix	Arizona			United States Unite			d States		
Mailing Address 15013 S. 24th Way				-					
Ċity	State				Zip				Country
Phoenix	Arizona			<b>-</b>	85048 Unite				United States
NAME OF SECOND INVENTO	OR:				A	petition ha	s bec	n Ned	for this unsigned inventor
Given Name (first and middle [i	if any])					Family Na	me o	Suma	me
Lars						Chapak	y		
Inventor's Signature	~ (B	è (Co	h						6/9/05
Residence: City	State	0		Cour	•				enship
Tempe	Arizona			United States Unit			ed States		
Mailing Address 5063 S. Rooseveit Street									
City	State				Zip			Coun	
Tempe	Tempe Arizona 85282 United States						ed States		
Additional inventors or a legal re	presentative are bein	g named or	n the	upplem	wtel:	shoet(s) PTO	5B/C2/	or OZLA	attached hereto.

Under the Paperwork Reduction A			U.S. Pa	and read Tendament	& Officer III S	DEPARTMENT	(09-04) OMB 0651-0032 OF COMMERCE
			Attorney D Number	ocket	112624.		
	DECLARATION FOR UTILITY OR DESIGN		First Name	d Inventor	Wayne	D. Frasch	
PATENT AF	•	Ni	COMPLETE IF KNOWN				
(37 CF	R 1.63)		Application	Number	To be a	ssigned	
Declaration CR	Declaration		Filing Date		June	10, 200	 5
Submitted OR With Initial	Filing (st	Submitted after Initial Filing (surcharge	Art Unit		To be a		
Filing	(37 CFR required	, 1.16 (e)) )	Examiner	Name	To be a	benglaa	
Each inventor's residence, mailing address, and citizenship are as stated below next to their name.  I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:  POLARIZATION-ENHANCED DETECTOR WITH GOLD NANORODS FOR DETECTING NANOSCALE ROTATIONAL MOTION AND METHOD THEREFOR  (Title of the Invention)  the specification of which  is attached hereto							
OR was filed on (MM/DD/Y	m [	12/11/03	as Unit	ed States App	lication Nu	umber or PCT	`International
Application Number PCT/U	S03/39435	and was amend	ded on (MM/C	DOMYYY)			(if applicable).
I hereby state that I have revie amended by any amendment	wed and under specifically refe	stand the conten	its of the abo	ve identified sp	ecification	n, Including th	e claims, as
I acknowledge the duty to di- continuation-in-part application and the national or PCT interm	sciose informat ns, material info ational filing da	tion which is ma commation which the of the continue	pecame avail ation-in-part a	able between application.	the filing o	date of the pr	or application
I hereby claim foreign priority inventor's or plant breeder's ri country other than the United application for patent, inventor before that of the application of	ights certificate States of Amer 's or plant bree	(s), or 365(a) of ica, listed below der's rights certi	any PCT inte and have als	mational applionation of identified be ny PCT International	ication wh dow, by ch ational app	ich designate lecking the bo plication havir	nd at least one ox, any foreign ng a filing date
Prior Foreign Application Number(s)	Country	Foreign Fill (MM/DD/		Priorit Not Clain	y ned	Certified Co	py Attached?
PCT/US03/39435	PCT	12/11/2003			chect ET		
Additional foreign ap	plication number	ers are usted on a	a supprement	as phonty data	STEEL P	CISDIUZD BII	acted tratam.

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or rotain a benefit by the public which is to Ele (and by the USPTO to process) an application. Confidentially is governed by 35 U.S.C. 122 and 57 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gardering, propering, and submitting the completed application form to the USPTO. Time will vary depending upon the individual minutes to complete, including gardering, propering, and submitting the complete displaced in form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Collect. U.S. Department of Commerce, P.D. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED Officer. U.S. Department of Commerce, P.D. Box 1450, Alexandria, VA 22313-1450.

If you need assistance completing the form, call 1-800-PTO-9139 and select option 2. 1934600

(09-04)
Approved for use through 07/31/2008. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respund to a collection of inframetion unless it contains a valid OMB control number,

## DECLARATION — Utility or Design Patent Application

correspondence to:	e address sociated with istomer Number	2670	7		OR		Correspondence address below		
Name						·	<u> </u>		
Address		<del></del>	<u> </u>			<del></del>			
City			Star	be)			ZIP		
Country		Telephone		-	Fax	· · · · · · · · · · · · · · · · · · ·			
and belief are believed to be statements and the like so made	I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.								
NAME OF SOLE OR FIRST IN			A petition				ned inventor		
Given Name (first and middle [i	fany])	•		1_	mily Name o	or Suma	ımə		
Wayne D.				1-13	asch				
Inventor's Signature	) Tras	ch					6-8-05		
Residence: City	State		1	ntry		Citize	•		
Phoenix V	Arizona			led Sta	tes .	Unite	d States		
Mailing Address 15013 S. 24th Way									
City	State			Zip		T	Country		
Phoenix	Arizona			85048			United States		
NAME OF SECOND INVENTO	R:			Apeti	jion has bee	n filed f	for this unsigned inventor		
Given Name (first and middle [it	[any])			Fan	nily Name or	Suman	ne		
Lars				Ch	napsky		·		
Inventor's Signature						·	Date		
Residence: City	State			Country			Citizenship		
Tempe	Arizona			United States U			Inited States		
Mailing Address 5063 S. Roosevelt Street									
City	State			Ζīρ		Count	•		
Tempe	Arizona			85282 United States					
Additional inventors or a legal rep	resentative ere beir	named on the	supplen	deents Istner	(a) PTO/SB/02/	or 02LR	otteched hereto.		